ABSTRACT OF THE DISCLOSURE

Circulatory assistance is provided in a non-invasive procedure safely and effectively using a microprocessor of an external counter pulsation device programmed to control the actuation of any or all of a plurality of valves, each of which is mounted on and in fluid communication with one of a plurality of individual inflatable bladders disposed in pockets within cuffs encasing the calves, thighs, buttocks, abdomen and/or chest of a person and an optional valve in fluid communication with the person's airway, in any desired sequence or order, toward the heart or toward the feet, either during diastole or systole, at desired inception times during the cardiac cycle, for selected durations and at chosen pressures, for treating a variety of cardiac, non-cardiac and circulatory conditions.